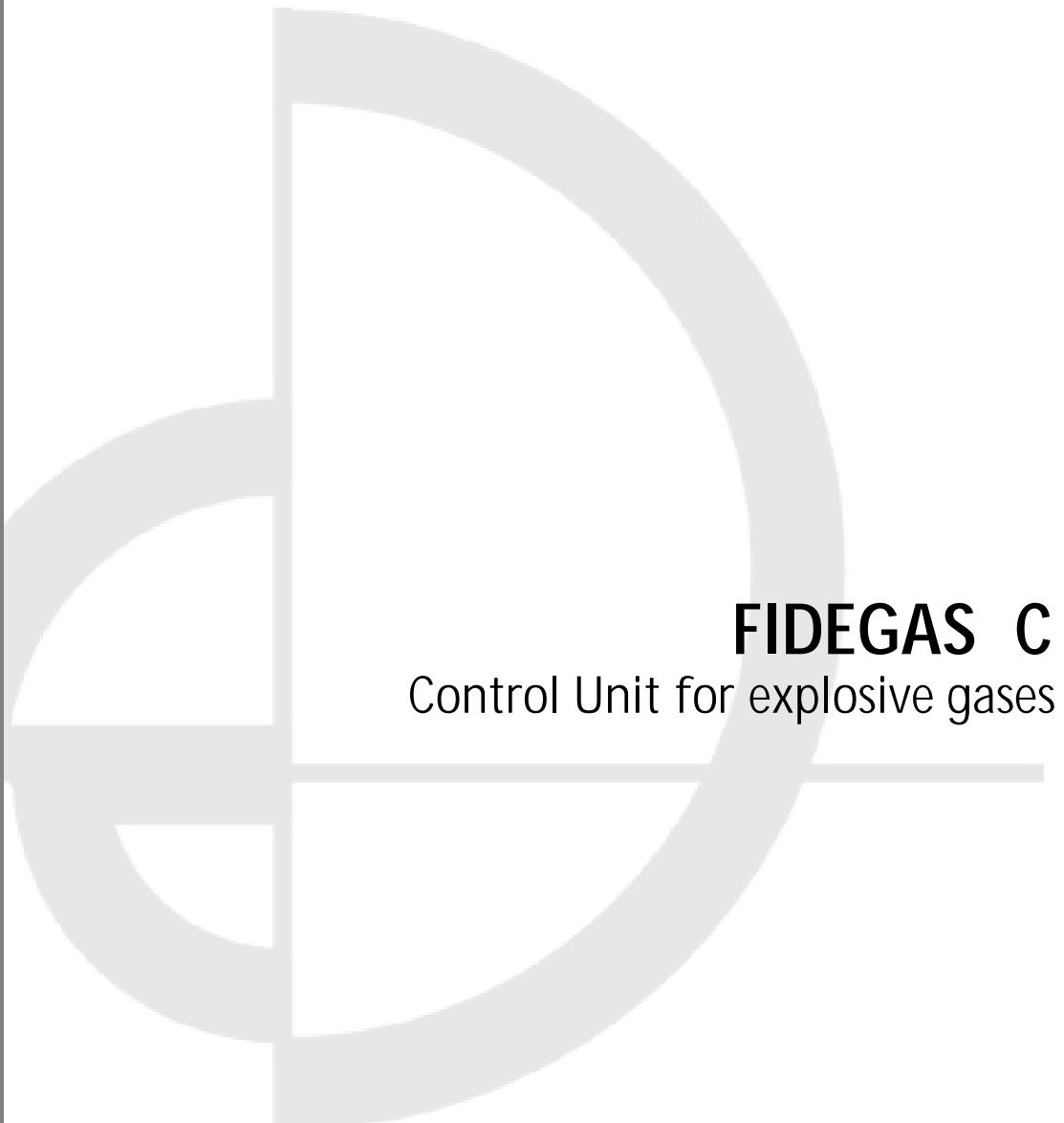


Installation & user manual



DURAN[®]
electrónica

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1. DESCRIPTION OF THE EQUIPMENT

FIDEGAS C2, FIDEGAS C6, and FIDEGAS C12 are Control Units for the detection of explosive gases provided of 4-20mA input standard specially developed for **FIDEGAS S/10 detectors**.

FIDEGAS C2 -up to 2 detectors-

- LED ON
- PREALARM level independent for each detector, marked as P1 & P2 -LED yellow-.
- ALARM level independent for each detector, marked as A1 & A2 -LED red-. The Control Unit will memorise this event until it is manually deleted.
- OUTPUT LED
 - ON. -green- the output is activated. The cut-off gas valves are powered.
 - OFF. the optical-acoustic alarms are powered.
- PREALARM OUTPUT that can be activated by any of the connected detectors. There is no visual indication for this output's state.
- RESET button, located in the panel -red box label-. After an alarm event, reset the system by pressing it for 2 s just until the red LEDs A1 & A2 light off and the green OUTPUT LED light on. If in two or three seconds the red LED does not light off the detector could be detecting gas up to 20% L.E.L. or there is a system failure.

FIDEGAS C6 -up to 6 detectors-

- LED ON
- ALARM level, independent for each detector -red LEDs marked with detector numbers 1, 2, 3, 4, 5 & 6. The Control Unit will memorise this event until it is manually deleted.
- OUTPUT LED - 1 or 2-
 - ON, the output is activated. The shut-off gas valves are powered.
 - OFF, the optical-acoustic alarms are powered.
- PREALARM OUTPUT that can be activated by any of the connected detectors. There is no visual indication for this output's state.

FIDEGAS C12 -up to 12 detectors-

- LED ON
- ALARM level, independent for each detector -red LEDs marked with detector numbers 1, 2, 3, 4, 5, 6,etc.... The Control Unit will memorise this event until it is manually deleted.
- OUTPUT state led (green led labelled as OUTPUT 1, OUTPUT 2, OUTPUT 3 and OUTPUT 4), when it is on the output is activated and the connected gas shut off valves are energised; when it is off the output is not active and the optical-acoustic alarms are energised instead.
This central unit is provided with a PREALARM output, activated by any of the connected detectors at 10 % L.E.L. (Lower Explosion Limit) and there is no visual indication of this output's state.
- RESET button, located in the front panel as a red box label to reset the system after an alarm event. Keep pressing 2 s just until the red LEDs, A1 and A2, light off and the LED OUTPUT -green- light on. If in 2 or 3 s the red LEDs do not light off, then the detector is still detecting gas or there is a system failure.

A gas detector is not the substitute of a correct installation and maintenance of gas appliances and must be installed by a competent person or an authorised installer.

2. FUNCTIONING

1. Connect the **FIDEGAS S/10** detectors to the **FIDEGAS C2, C6 or C12** Control Units.

INSTALLING FIDEGAS S/10 DETECTORS

Install the detectors avoiding air flows and places where dust and dirt can block the protection filter of the sensor, bearing in mind its coverage area of 15 m².

Do not install in small closed areas (as closets, etc).

BUTANE / PROPANE	25cm from floor.
METHANE / NATURAL GAS	15cm from ceiling.

Jump "S" to "⊥" if one of the detectors is not going to be installed.

2. Connect the Control Unit to the mains supply -230V AC-. The ON LED -green- will light up and a few seconds later the ALARM LED -red- will also light up. The OUTPUT LEDs will remain off.
3. After approx. 20 s and by pressing RESET the system will be reset.
4. The ALARM LEDs light off -if there is no presence of gas or a wrong connection- and the OUTPUT LEDs – outputs 1 & 2 for **FIDEGAS C6 & FIDEGAS C12**- will light on.
5. Now the Control Unit is ready to detect.

PREALARM LED.- It will light up to indicate that the gas concentration has exceed the 10% L.E.L.. It will activate the PREALARM output -P1 or P2 LEDs-. This output remains active for about 2 minutes after reaching 10% L.E.L. signal. The output is located at the PREALARM connectors -12V DC & 230V AC-.

ALARM LED.- It will light up to indicate that the gas concentration has reached 20% L.E.L. The corresponding ALARM LED -A1 or A2- will light on, showing what detector activated the alarm. The output of the detector in alarm will stay inactive. The rearming will be carried out by pressing **RESET** until the corresponding ALARM LED light off and the OUTPUT LED light on.

In **FIDEGAS C6 & C12**, A strip line is reserved at the front panel of the Control Unit, next to each ALARM LED to indicate the location the detector.

AUXILIARY BATTERY –Optional-. - The Control Unit is provided of a connection for auxiliary battery that avoids operation interruptions due to eventual mains faults. The autonomy of the battery full loaded is about 45 min. The alarm central unit is provided with its own battery charger system and it avoids battery discharge in normal operation.

OUTPUT ADDRESSING SELECTION (FIDEGAS C6).- The central unit is provided with two microswitches that allow selection of the outputs that will be activated by each detector, OUTPUT 1 or/and OUTPUT 2. The microswitches are located at the circuit board and they are numbered with each detector number. Selection of the output for each detector is made when the switch of a detector is at ON position for OUTPUT 1 or OUTPUT 2, or both. **Make sure that they are not at OFF position or at an intermediate position.**

*	*	*	*	*	*
1	2	3	4	5	6
*	*	*	*	*	*

ON
S1
OFF

A) Outputs S1 and S2 actuate simultaneously turning off the green LEDs when gas is detected (ALARM), both outputs are activated by any detector.

FACTORY SET DEFAULT POSITION

*	*	*	*	*	*
1	2	3	4	5	6
*	*	*	*	*	*

ON
S1
OFF

B) Output 2 green led turns off, output gets inactive when gas is detected by any of the detectors (ALARM).

IN THIS POSITION OUTPUT 1 DOES NOT OPERATE.

*	*	*	*	*	*
1	2	3	4	5	6
*	*	*	*	*	*

ON
S1
OFF

C) Gas detection is only performed by indicating the detector that detected gas.

IN THIS POSITION NO OUTPUT OPERATES

*	*	*			
			*	*	*
1	2	3	4	5	6
*	*	*	*	*	*

ON
S1
OFF

D) To select the DETECTORS to be actuating over OUTPUT 1, leave the switches at their original position and move the rest to the OFF position.

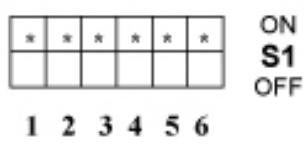
At OUTPUT 2, the switches of detectors actuating over OUTPUT 1 are moved to position OFF and the ones actuating over OUTPUT 2 to position ON.

In this example DETECTORS 1-2-3 actuate over OUTPUT 1 and DETECTORS 4-5-6 actuate over OUTPUT 2

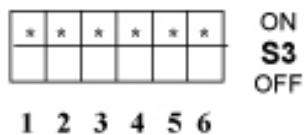
OUTPUT ADDRESSING SELECTION (FIDEGAS C12).- The central unit is provided with two microswitches at each circuit board named as S1 and S3 for upper board and S4 and S4 for lower board. They allow selection of the outputs that will be activated by each detector, OUTPUT 1-2 or/and OUTPUT 3-4. The microswitches are located at the circuit board and they are numbered with each detector number. Selection of the output for each detector is made when the switch of a detector is at ON position for OUTPUT 1-2 or OUTPUT 3-4, or both. **Make sure that they are not at OFF position or at an intermediate position.**

If a detector has to actuate on a specified output, the switch named with the detector number shall be in the ON position at microswitch group corresponding with that output.

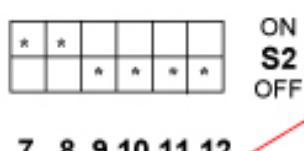
UPPER BOARD



A - Detectors 1, 2, 3, 4, 5 and 6 actuate on both output sets;
la OUTPUT 1-2 and OUTPUT 3-4.

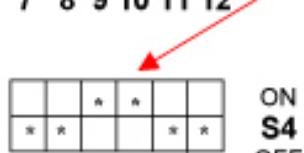


LOWER BOARD



B.- Detectors 7 and 8 ONLY actuate on OUTPUT 1-2.

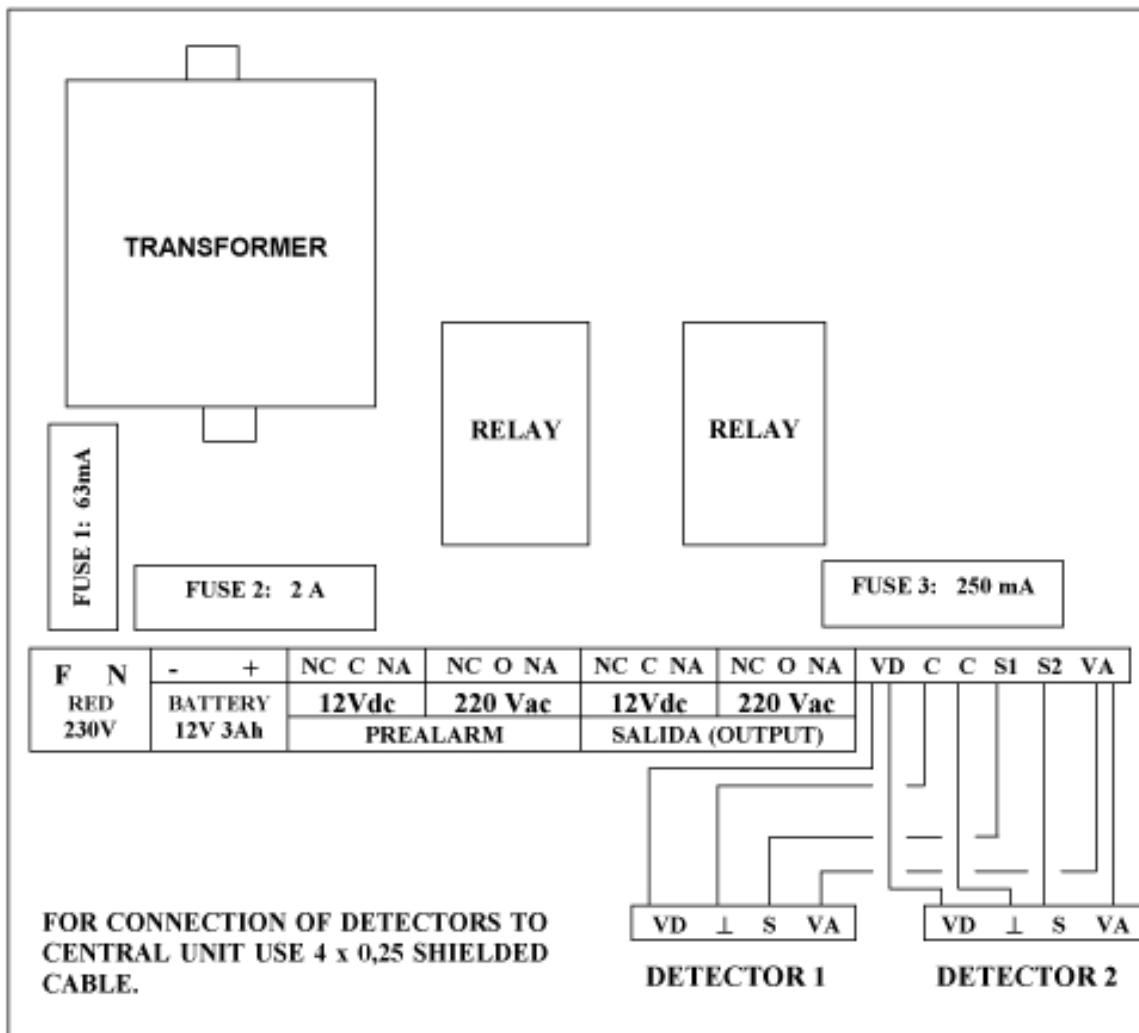
C.- Detectors 9 and 10 ONLY actuate on OUTPUT 3-4.



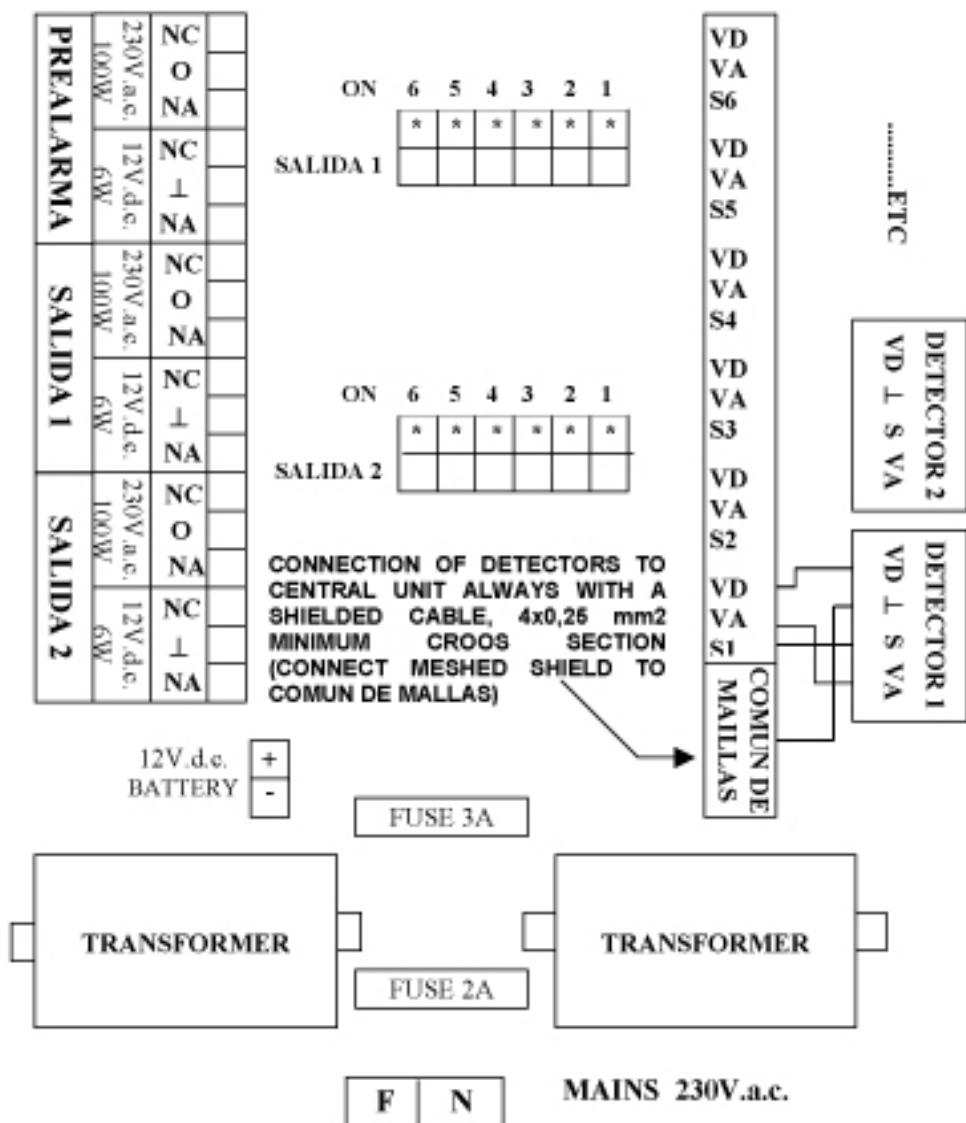
D.- CAUTION! Detectors 11 and 12 DO NOT ACTUATE on any output because the corresponding switches are not at ON position in any switches group.

3. CONNECTIONS

FIDEGAS C2: CONNECTIONS DIAGRAMS



FIDEGAS C6 & C12: CONNECTIONS DIAGRAMS



4. TEST

To verify the right operation of the gas detector use a gas tester corresponding to the same type of gas, allowing the gas to come out as near as possible of the metallic mesh filter until the detector alarms. Repeat this operation EVERY TWO MONTHS.

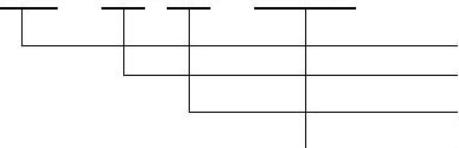
Do not use other methods that may draw false conclusions, such as gas lighters, flammable vapours, etc.

5. TECHNICAL CHARACTERISTICS

	FIDEGAS C-2	FIDEGAS C-6	FIDEGAS C-12
Voltage	230V CA 50/60 Hz 10W	230V CA 50/60 Hz 20W	230V CA 50/60 Hz 40W
Capacity	2 detectors	6 detectors	12 detectors
Prealarm Output	12V DC / 230V AC	12V DC / 230V AC	12V DC / 230V AC
Outputs with voltage	1 at 12V DC / 230V AC	2 at 12V DC / 230V AC	2 at 12V DC / 230V AC
Maximum power at 12V DC	0.25A 3W	0.5A 6W	0.5A 6W
Maximum power at 230V AC	100W	100W	100W
Actuation levels	2	2	2
Working/ storage temperature	From -5°C to 50°C	From -5°C to 50°C	From -5°C to 50°C
Working/ storage humidity	From 30% to 90% RH	From 30% to 90% R.H. From 95 to 110 kPa.	From 30% to 90% R.H. From 95 to 110 kPa.
Protection grade	IP 435	IP 435	IP 435
Dimensions (mm)	355 x 260 x 85	355 x 260 x 85	355 x 260 x 85
Weight (gr)	4,300	4,800	5,500
Auxiliary battery (optional)	12V 3Ah. 45 min autonomy full charge	12V 3Ah. 30 min autonomy full charge	12V 3Ah. 20 min autonomy full charge

SERIAL NUMBER

C C - A A M M - X X X X



Product code
Manufacturing year
Manufacturing month
Manufacturing number

6. WARNINGS

- Make sure that the **FIDEGAS S/10** detectors are correctly connected.
- Use shielded cable for the connection Control Unit-detector with minimum section of 4 x 0.25 mm². Connect the mesh shield to "**COMUN DE MALLAS**" according to the diagram.
- For **FIDEGAS C2** make sure the connection of "S" to "C" -**COMUN MALLAS**- is made when those detectors are not in used.
- For **FIDEGAS C6 & FIDEGAS C12** make sure that the connection "**L**" -**COMUN MALLAS**- is made when detectors are not in used.
- Make sure that the supply voltage is 230V AC.
- If an auxiliary battery has been installed, make sure the polarity is correct: positive (+) to red and negative (-) to black.
- Make sure the fuses values are optimal for the right operation of the Control Unit and can not be changed.
- Do not sink, wet or spray with any liquid.
- Avoid painting with synthetic paintings close to the detector.
- When the detector is for BUTANE/PROPANE and, therefore, it is installed close to the floor, avoid cleaning near the detector with detergents containing bioalcohol, industrial solvents or other products with silicon in suspension (shiners).
- The detector must not be in contact whit SILICONE VAPOURS, TRICLORINETHYLENE, SULPHUR DIOXIDE OR HYDROGEN SULPHIDE, since the sensor might irreversibly get damaged. Do not use cables containing silicone for the connection of the detector.
- Take into account that none of the detector elements should be manipulated, nor the adjustment, since it might cause an irreversible failure of the unit or an electrical shock.
- Take into account that the non observance of these basic rules may damage the unit and the manufacturer declines any responsibility of the damage it could cause.

7. GUARANTEE

DURAN ELECTRONICA guarantees this equipment against any manufacturing defect for 1 year from the date of purchase. If during this period of time any anomaly is detected, please advise your supplier or installer.

The guarantee covers the total repair of the equipment that the **DURAN ELECTRONICA** technical services consider to be defective, so that the equipment can return to its normal use. This guarantee will only be valid if the equipment has been installed by a competent person and following the specifications in this manual. Negligent use or installation will exempt **DURAN ELECTRONICA** from its responsibilities for damage caused to property and/or people and from the fulfilment of the terms of this guarantee.

The guarantee does not cover:

- Installations, periodical checks and maintenance.
- Repairs caused by improper handling, inappropriate use, negligence, overload, insufficient power supply or neglecting the equipment, voltage shorts, defective installations and other external causes.
- Repairs or adjustments carried out by personnel not authorised by **DURAN ELECTRONICA**.
- The equipment transport costs.

DURAN ELECTRONICA reserves the right to carry out improvements or to include modifications to this equipment without prior notice.



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